



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

1200 Sixth Avenue
Seattle, Washington 98101

Reply To
Attn Of: ECL-113

November 22, 2000

Ms. Kathleen Hain, Manager
Environmental Restoration Program
U.S. Department of Energy
Idaho Operations Office
785 DOE Place
Idaho Falls, Idaho 83402

Re: *Operable Unit 3-14 Tank Farm Soil and Groundwater
Remedial Investigation /Feasibility Study Work Plan (Draft Final)*

Dear Ms. Hain,

EPA comments on the draft final RI/FS Work Plan are enclosed. An asterisk has been added to comments that are considered most critical. In particular, issues regarding schedule and deliverables as well as those relating to probe location must be resolved prior to finalization of the work plan.

EPA will shortly be sending additional comments on the Injection Well Field Sampling Plan. New information was added to this section that was not discussed during the initial comment resolution period and EPA would like to have time to review and comment on these changes.

I appreciate the effort put forth to resolve comments on the draft document and look forward to working to resolve comments on the draft final version. Please call me at (206) 553-0040 if there are any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Kathy Ivy", is written over a horizontal line.

Kathy Ivy
Remedial Project Manager

Enclosure

cc: Margie English, IDEQ
Tally Jenkins, DOE-ID

**EPA NOVEMBER 22, 2000 COMMENTS ON
OPERABLE UNIT 3-14 TANK FARM SOIL AND GROUNDWATER
REMEDIAL INVESTIGATION/FEASIBILITY STUDY WORK PLAN (DRAFT FINAL)**

SPECIFIC COMMENTS

1. Page iii, "Abstract", third paragraph, fourth sentence: This sentence should state that treatability studies "may" rather than "will" be conducted.

2. Page vi, "Summary", second bullet, third sentence: It is not clear why CPP-61, CPP-81, and CPP-82 are being mentioned in reference to consolidation of Tank Farm soils in CPP-96.

***3. Page 1-17, Section 1.6.2, second paragraph, second sentence:** This sentence states that releases to the environment and Tank Farm components not assessed under HWMA closure will be evaluated by CERCLA. It is not clear when the CERCLA evaluation of these areas is intended to occur. Would these areas be identified and considered for CERCLA evaluation after each set of tanks is closed as proposed for HWMA-closed systems?

4. Page 1-20, Section 1.6.4, second bullet: Reference to paving within the Tank Farm was removed from the draft OU 3-13 interim action work plan in response to EPA comment #16. This bullet should be deleted in the OU 3-14 work plan as well.

5. Pages 2-19 through 2-20, Section 2.1.2: Some of the information in this section is redundant or provides unnecessary detail. The first paragraph in Section 2.1.2 could be consolidated into a single sentence and included at the end of the tank closure discussion. The second paragraph in this section contains information included in later paragraphs, so this text could be deleted. The second paragraph in Section 2.1.2.1 contains an explanation of HWMA/RCRA closure standards which includes more detail than is needed for the purposes of the OU 3-14 work plan.

6. Pages 2-34 through 2-35, Section 2.3.2: Some of the paragraphs in this section are out of order. The second paragraph on page 2-34 is chronologically out of place and includes the same information found in the third full paragraph on page 2-35, so this paragraph could be deleted. Information about well monitoring included in the last three paragraphs on page 2-34 and the first full paragraph on page 2-35 interrupt the discussion about injection well history and should be moved to the end of this section.

7. Page 4-1, Section 4.1, first paragraph, last sentence: Reference to discussion of the AOC should be deleted.

8. Page 4-2, Section 4.1.2, fourth bullet: DOE should clarify the intent to address contaminated and abandoned piping in terms of the CEC&C process as discussed in Section 1.6.

9. Page 4-3, Section 4.1.2, third bullet, last sentence: It should also be added that assumptions can also be obtained from an approved tank closure plan when this becomes available.

10. Page 4-3, Section 4.1.3: All text in this section, excluding the last sentence, should be deleted and reference to the AOC within the last sentence should be removed. The section could be re-titled "Investigation Derived Waste." Discussion of an AOC is not appropriate for the investigation stage.

***11. Page 4-8, Section 4.3.1, "Field Investigation Phase I":** It is not clear how Phase I investigations, which will involve downhole gamma logging, will provide information about the distribution of plutonium isotopes. Does this sentence refer to an estimate of plutonium isotopes using process knowledge and radionuclide ratios or is it describing detailed speciation that is part of Phase II investigations?

***12. Page 4-10, Section 4.4.1.1, first paragraph, last sentence:** This sentence should be more specific in defining OU 3-14 COPCs and the difference between OU 3-14 COPCs and OU 3-13 COPCs since both terms are used throughout the text. The OU 3-13 COPCs should be described as those contaminants identified as a potential concern through OU 3-13 investigations. Table 3-1 should be referenced. It should then be explained that OU 3-13 investigations were not complete, so OU 3-14 sampling will include a specific list of analytes from which OU 3-14 COPCs will be determined. Table 2-1 in the Tank Farm Field Sampling Plan should be referenced.

13. Page 4-12, "AA-3-B": This is the first place where the term Remediation Stage II is introduced. Reference to DQO Step 4 should be included here.

14. Page 4-21, Section 4.4.1.7: In Section 4.4.1.4, these remediation stages are described as occurring after the OU 3-14 ROD is signed. In this section, Remediation Stage I and II appear to occur before OU 3-14 ROD signature. The time frame for characterization and remediation stages needs to be resolved.

***15. Page 4-28, Section 4.4.2.3, "Inputs for PSQ-2a", last sentence:** A discussion about Injection Well OU 3-14 COPCs should be moved back as part of DQO Step 1 on page 4-21 (see comment #12). The difference between OU 3-14 COPCs and OU 3-13 COPCs should also be explained. Table 3-1 should be referenced as part of the description of OU 3-13 COPCs. Tables 5-1 and 5-2 in the Injection Well Field Sampling Plan should be referenced to describe the specific list of analytes from which OU 3-14 COPCs will be determined.

16. Page 4-31, Section 4.4.2.4, "Operational boundaries": This section should be revised to describe Injection Well operational boundaries rather than Tank Farm soil operational boundaries.

17. Page 4-39, Section 4.5.3, second paragraph, fourth sentence: This should be revised to reflect that the core will be maintained by OU 3-14.

***18. Page 4-51, Section 4.6.1.3, second paragraph, third paragraph:** This sentence should be revised to state that the sediment core will be sampled for analytes in Table 5-1 in the Injection Well Field Sampling Plan.

19. Page 4-51, Section 4.6.1.3, third paragraph, fifth sentence: This should be revised to reflect that the core will be maintained by OU 3-14.

***20. Page 4-55, Section 4.6.2, first paragraph, last sentence:** Ongoing groundwater sampling is scheduled biannually at the two new monitoring wells. Frequency of sampling should be re-evaluated after Phase I sampling results have been analyzed. Sampling frequency could be revisited in the Phase II work plan.

***21. Page 4-57, Section 4.6.2.2, first sentence:** Frequency and duration of groundwater sampling should be re-evaluated after Phase I sampling results have been analyzed. Sampling frequency and duration could be revisited in the Phase II work plan.

22. Page 4-57, Section 4.6.2.6: This section concerning the BRA should be revised to reflect language included in Section 5.5.4.

23. Page 6-1, Section 6:

- The Phase II Characterization Work Plan should be considered a primary document because it is a second phase of the RI/FS Work Plan. The description of the Phase II work plan in Section 6.1 should include a statement that this document will evaluate additional data needs identified in the Phase I Summary Report, Additional Soil Sites Summary Report, and the Aquifer Summary Report. Also, it is not clear if there is any advantage to submitting these summary reports separately.
- Issues concerning K_d values and contaminant leachability could be addressed as part of the Phase II Characterization Work Plan rather than in a separate Contaminant Transport Study Work Plan. This would consolidate the review period for both the work plans and the follow-up reports.
- The FS Report should be an RI/FS Report as called for in the FFA/CO.
- A time period for each scoping meeting should be included in the schedule.
- Scheduling Tank Farm probe installation during the winter may not be advisable for a number of reasons including possible installation difficulty under winter conditions, work stoppage resulting from adverse weather conditions, added project cost due to winter work, and additional difficulty in replacing the polyurea coating around newly installed probes due to weather conditions.

24. Attachment A, page iv, fourth paragraph, second-to-last sentence: Scopes of Work for both the Tank Farm and Injection Well Field sampling plans were not included with the draft final document. Information included in these SOWs appears to have been added to the FSPs. If this is the case, reference to the SOWs in both Attachment A and B should be removed throughout the text.

25. Attachment A, page 3-3, Section 3.2, first partial paragraph, second sentence: It states here that material will be selectively sampled for laboratory radionuclide analysis. This should be revised to include metals.

***26. Attachment A, page 3-4, Section 3.3.4:** This section should include an explanation for the "critical" designation for these probe locations. Also, the last sentence in this section states that if an acceptable alternative sample location cannot be found, a critical sample will not be considered non-critical. A critical sample should not be downgraded to non-critical for the purposes of completeness goals.

***27. Attachment A, page 4-1, Section 4.3, paragraph 4:** The logic provided for addressing cross contamination is not clear. Cross contamination can be an issue depending on the sampling methodology. Where will samples be taken of the "vacuumed" soil? One has two options: (1) take samples from the hole as excavation proceeds, or (2) take the samples from the drum. If samples are taken from the drum, one needs to describe in detail the method to ensure what is taken from the drum is representative of the volume element of interest.

***28. Attachment A, page 4-2 through 4-11, Figures 4-1 through 4-6:** There is not adequate information in these figures or the text to determine if the location of the new probeholes are appropriate. Putting together a rough overlay of these figures shows that some of the new probeholes are very close to previous probe locations. Also, no data is provided correlating the previous sample locations and the gamma levels found. The location of piping is shown in Figures 4-4 through 4-6, but pertinent pipes are not labeled.

The Track 2 indicates that the pipe running just south of the CPP-28 footprint, PWA-1005, carried first-cycle raffinate that leaked through the pipe encasement. It would appear that G1-69 and B1-03 might be in a good location to detect the boundary of the initial leak as well as locate any additional leaks from this section of pipe. If this level of information was provided with these figures, a better determination of adequate probehole location could be made. It would be very helpful if the location of piping that carried first-cycle raffinate was highlighted considering that a small leak from one of these lines could contribute considerably to groundwater risk.

29. Attachment A, page 4-5, Section 4.4, fifth paragraph: This sentence discusses subsequent probehole locations. Is this referring to revised locations for probeholes that could not be completed?

***30. Attachment A, page 4-3, Section 4.1.1:**

Note (1) How will the drilling subcontractor be selected and how will he prepare to have appropriate equipment available if you intend to have him involved in determining the approach for the scope of work? Will this solicitation include several drilling contractor's approaches to the project from which one with similar experience and suitable equipment will be selected?

Note (2) The concern with drilling a borehole that deviates from the injection well has two components. The first is that if the borehole deviates sufficiently from the injection well than at a final depth the borehole may not encounter the sludge that is the goal of the sample collection.

The second is that if the borehole deviates at a sufficiently severe angle from vertical (or opposite the track of the old well) then it will be increasingly difficult to case or abandon. As close as the borehole will be to the former injection zone an open borehole, if left uncased or grouted, could allow vertical migration of residual contaminants if they are present.

***31. Attachment B, page 4-12, Section 4.4.2.1, first paragraph, last sentence:** It states here that the core will be screened using a hand-held radiation detector, but no sampling is proposed. In the last paragraph of Section 3.2.1 in the draft work plan, opportunistic samples were required if field screening indicated contamination in the core. The samples that were included in the corresponding tables in Appendix A were not carried over in the draft final version. If field screening indicates contamination, it would make sense to sample that portion of the core.

32. Attachment B, page 5-2, Section 5.2.2, "Sample Type" and "Collection Type": The nomenclature for sample and collection type do not match what is used in the sampling tables in Appendix A and the version that was updated in Tank Farm Field Sampling Plan, Section 6.2.2.

EDITORIAL COMMENTS

- 1. "Contents", page xvii:** A list of appendices should be included here.
- 2. "Figures" and "Tables", pages xvii through xx:** Page numbers should be revised to correlate with the location of figures and tables within the document.
- 3. Page 2-4, Section 2.1, paragraph 4&5, last sentences:** An incorrect figure is referenced.
- 4. Page 2-12, Section 2.1.1.4.1:** There should be a bullet in front of the piece of text at the bottom of this page.
- 5. Page 2-19, Section 2.1.1.4.3:** There should not be a section number in front of the paragraph of text at the top of this page.

- 6. Page 2-28, Section 2.3.1, first paragraph, last sentence:** Reference dates should be resolved in the final version of the work plan.
- 7. Page 3-1, Section 3, first sentence:** The phrase “OU 3-14 ROD” should be changed to “OU 3-13 ROD.”
- 8. Pages 3-52 through 3-53, Figures 3-9 and 3-10:** These figures should be moved to the section on page 3-9 that discusses site CPP-26.
- 9. Page 4-6, Section 4.1.11, first paragraph, third sentence:** This sentence refers to groundwater “beneath” the INTEC fence line. This word should be changed to “within” or “inside.” There are a number of other areas throughout the text that need to be similarly revised.
- 10. Page 6-2, Section 6.1, second bullet:** The section starting with “Contaminant Transport Study Work Plan” should be separated under a separate bullet.
- 11. Attachment A, page 2-12, Section 2.2.10, second paragraph, third sentence:** Text is missing from this sentence.
- 12. Attachment A, page 3-5, Section 3.3.5, last sentence:** The heading “Sample Prioritization” should be removed.
- 13. Attachment A, page 4-8, Section 4.6, last paragraph, first sentence:** The figures referenced should be 4-4, 4-5, and 4-6.
- 14. Attachment A, page 4-9, Figure 4-4:** The probehole A1-23 is mislabeled.
- 15. Attachment A, page 4-10, Figure 4-5:** The probehole B1-10 should be labeled B1-08.
- 16. Attachment A, page 7-2, Section 7.3, second bullet:** The phrase “Attachment C” should be changed to “Appendix E.”